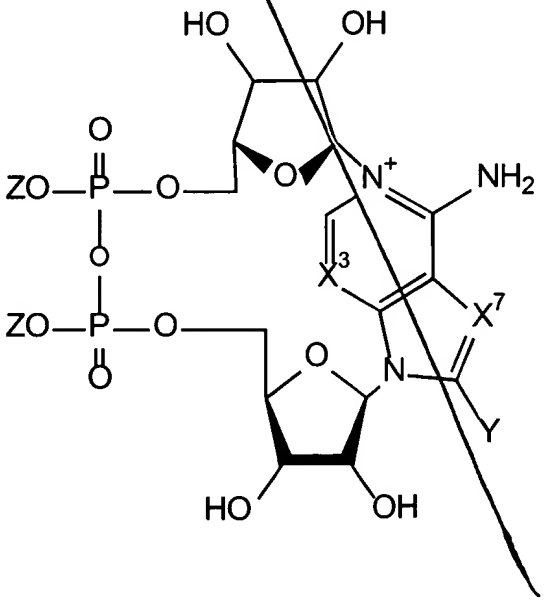
1. A method for modulating T cell activation *in vivo* or *ex vivo* in a mammal comprising administering to the mammal or a mammalian T cell culture an effective amount of a compound capable of antagonizing a sustained cADPR-mediated rise in intracellular $Ca^{2+}$ levels in a T cell, said rise being in response to stimulation of the T cell receptor/CD3 complex of the T cell.

2. A method according to claim 1 wherein the compound modulates the binding of cADPR to a ryanodine receptor/$Ca^{2+}$ channel.

3. A method according to claim 1 wherein the compound is a cADPR analogue.

4. A method according to claim 3 wherein the compound comprises an adenine component to which is individually linked two ribose moities or a derivative(s) thereof, which ribose moities are joined *via* a pyrophosphate bridging group.

5. A method according to claim 3 wherein the compound has the formula (2):




(2)

wherein:

$X^3$ is independently either $CR^1$ or N;

$X^7$ is independently either $CR^2$ or N;

Y is selected from the group consisting of halo, $C_1$ to $C_{20}$ hydrocarbyl, $N(R^3)(R^4)$, $OR^5$, $SR^6$ nitro and carboxyl, wherein each of $R^1$, $R^2$, $R^3$, $R^4$, $R^5$ and $R^6$ is independently either H or $C_1$ to $C_{20}$ hydrocarbyl; and

Z is independently selected from the group consisting of H, a caging group, a bio-isostere, and a pharmaceutically acceptable salt thereof.

8. A method according to claim 10 wherein the patient has a graft rejection or an autoimune disease selected from the group consisting of thyroiditis, insulitis, multiple sclerosis, iridocyclitis, uveitis, orchitis, hepatitis, Addison's disease, myasthenia gravis, rhematoid arthritis and lupus erythematosus.

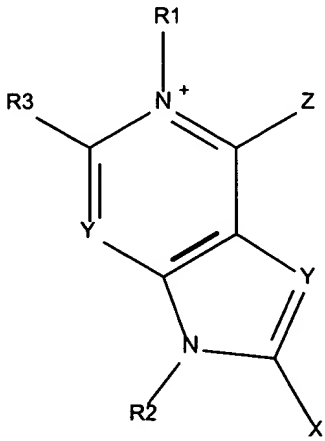
15. A compound identified by a method of claim 17.

Please cancel claims 6, 7, 9 to 14, and 16 to 18 and add the following new claims 19 to 31:

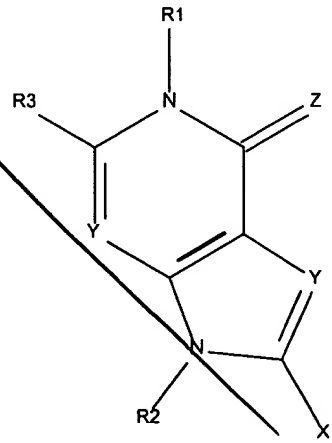
19. A method according to claim 1 wherein the compound is 7-deaza-8-Br-cADPR or 8-Br-cADPR.

20. A method according to claim 1 wherein the compounds have either formula (3) or (4):

Formula (3)




Formula (4)



wherein, for formula (3), Z is selected from the group consisting of OH, OR, SH, $SR^6$, $NH_2$ and $NHR^1R^2$ and, for formula (4), Z is selected from the group consisting of O, S, NH and $NHR^1$; and wherein for either formula (3) or formula (4),

Y is either N or CH;

X is selected from the group consisting of halo, $NH_2$ or $NHR^1R^2$;

$R_1$ and $R_2$ are independently selected from the group consisting of H, $C_1$ to $C_{20}$ hydrocarbyl, sugar moieties and phosphate groups; and

$R_3$ is selected from the group consisting of H and $C_1$ to $C_{20}$ hydrocarbyl, a bio-isostere, and a pharmaceutically acceptable salt thereof.

21. A method according to claim 1 which modulates the immune response in the mammal.

22. A method according to claim 1 wherein T cells are removed from a mammalian patient, treated with the compound, and then returned to the patient.

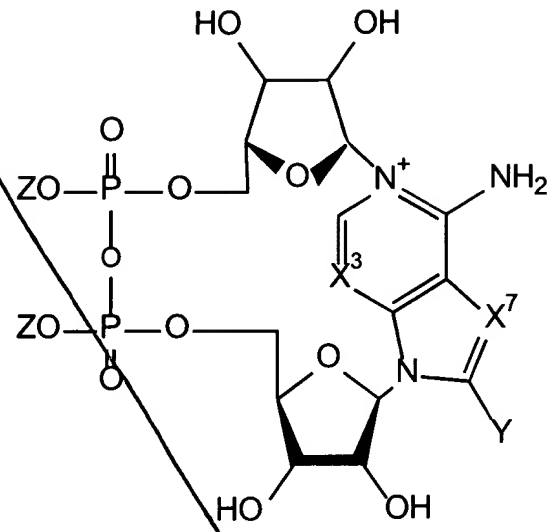
23. A method of treating a human or animal patient suffering from an immune disorder which method comprises administering to the patient an effective amount of a compound capable of antagonizing a sustained cADPR-mediated rise in intracellular $Ca^{2+}$ levels in a T cell, said rise being in response to stimulation of the T cell receptor/CD3 complex of the T cell, such that T cell activity is modulated.

24. A method according to claim 23 wherein the compound modulates the binding of cADPR to a ryanodine receptor/$Ca^{2+}$ channel.

25. A method according to claim 23 wherein the compound is a cADPR analogue.

26. A method according to claim 25 wherein the compound comprises an adenine component to which is individually linked two ribose moities or a derivative(s) thereof, which ribose moities are joined *via* a pyrophosphate bridging group.

27. A method according to claim 25 wherein the compound has the formula (2): formula (2):



(2)

wherein:

$X^3$ is independently either $CR^1$ or N;

$X^7$ is independently either $CR^2$ or N;

Y is selected from the group consisting of halo, $C_1$ to $C_{20}$ hydrocarbyl, $N(R^3)(R^4)$, $OR^5$, $SR^6$ nitro and carboxyl, wherein each of $R^1$, $R^2$, $R^3$, $R^4$, $R^5$ and $R^6$ is independently either H or $C_1$ to $C_{20}$ hydrocarbyl; and

Z is independently selected from the group consisting of H, a caging group, a bio-isostere, and a pharmaceutically acceptable salt thereof.

28. A method according to claim 27 wherein the patient has rheumatoid arthritis.

29. A method for identifying a substance capable of modulating a sustained rise in $Ca^{2+}$ entry *via* a cADPR-mediated pathway which method comprises either:

(i) contacting an ADP-ribosyl cyclase or a homologue, variant or derivative thereof, with a substance to be tested under conditions that would permit the synthesis of cADPR in the absence of the substance, and determining whether the substance affects cADPR synthesis; or